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African Federation for Emergency Medicine

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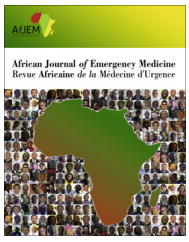

# ABSTRACTS

## Global research highlights

AfJEM has partnered with a small group of selected journals of international emergency medicine societies to share from each a highlighted research study, as selected monthly by their editors. Our goals are to increase awareness of our readership to research developments in the international emergency medicine literature, promote collaboration among the selected international emergency medicine journals, and support the improvement of emergency medicine world-wide. Abstracts are reproduced as published in the respective participating journals, and are not peer reviewed or edited by AfJEM.

## African Journal of Emergency Medicine

*The Official Journal of the African Federation for Emergency Medicine, the Emergency Medicine Association of Tanzania, the Emergency Medicine Society of South Africa, the Egyptian Society of Emergency Medicine, the Libyan Emergency Medicine Association, the Ethiopian Society of Emergency Medicine Professionals, the Sudanese Emergency Medicine Society, the Society of Emergency Medicine Practitioners of Nigeria and the Rwanda Emergency Care Association*

### The availability of alternative devices for the management of the difficult airway in public emergency centres in the Western Cape

Jooste WJL, Van Hoving DJ. Afr J Emerg Med 2015;5(1): 19–23
URL: http://www.sciencedirect.com/science/article/pii/S2211419X14001372

**Introduction:** The failed or difficult airway is a rare, but life-threatening situation. Alternative airway devices to direct laryngoscopy are essential aids to manage these scenarios successfully. The aim of this study was to determine which alternative airway devices are currently available in public emergency centres in the Western Cape Province, South Africa.
**Methods:** A cross sectional study was conducted in 15 emergency centres. Data regarding the availability of different classes of alternative airway devices were documented on a standardised data collection sheet by a single investigator via direct observation. Incomplete or non-functional equipment was classified as unavailable. Summary statistics were used to describe the data.
**Results:** Twenty-six different types of alternative airway devices were documented. Three centres (20%) had no alternative airway device. Five centres (33.3%) stocked only one device, three centres (20%) had two devices and four centres (26.7%) had more than two devices. Most centres ($n$ = 12, 80%) stocked supraglottic airways (only one centre (6.7%) had paediatric sizes). Tracheal tube introducers were available in five centres (33.3%). Four centres (26.7%) had video-laryngoscopes, but none had optical laryngoscopes. Retroglottic devices and needle cricothyroidotomy equipment were available in two centres (13.3%). Although surgical cricothyroidotomy equipment was available, the equipment was widely dispersed and only three centres (20%) had pre-packed sets available. None of the specialised paediatric centres had needle cricothyroidotomy equipment readily available.
**Discussion:** The study demonstrated that Western Cape public emergency centres are currently inadequately stocked with regard to alternative airway devices. A guideline regarding the procurement and implementation of these devices is needed.

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## Annals of Emergency Medicine

*Official Journal of the American College of Emergency Physicians*

### Ischaemic conditioning: Implications for Emergency Medicine

Frumkin K, Bloom AS. Ann Emerg Med 2016;68(3):268–74
URL: http://www.annemergmed.com/article/S0196-0644(16)00124-4/fulltext

Ischaemic conditioning refers to the ability of brief episodes of controlled hypoperfusion around the time of an acute

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ischaemic event to protect the target organ from reperfusion injury. A considerable body of literature suggests that interventions as simple and safe as repetitively inflating a blood pressure cuff could reduce the size and long-term morbidity of myocardial and cerebral infarction. This review introduces and summarises the body of evidence contributing to these impressions.

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# Emergency Medical Journal

*Official Journal of the Royal College of Emergency Medicine*

## Validation of ABCD2 scores ascertained by referring clinicians: A retrospective transient ischaemic attack clinic cohort study

Dutta D, Bailey SJ. Emerg Med J 2016;33(8):543–7
URL: http://emj.bmj.com/content/33/8/543.long

**Introduction:** Transient ischaemic attack (TIA) services routinely use ABCD2 scores ascertained by referring clinicians to triage patients. Most ABCD2 validation studies have used ABCD2 scores calculated by stroke-specialist investigators and not referring clinicians. This study aimed to assess the usefulness of referring clinicians' ABCD2 scores in predicting strokes.

**Methods:** A retrospective study of a TIA clinic cohort from Gloucester, UK, followed up for 4 years from 2010 to 2012. ABCD2 scores were dichotomised to high risk—ABCD2 $\geqslant 4$ and low risk—ABCD2 $< 4$. Outcomes of interest were subsequent stroke and stroke or TIA. Survival analysis was used determine the cumulative probability of these outcomes and to identify if ABCD2 risk category was associated with stroke.

**Results:** Of 1067 (284 high risk, 783 low risk) patients, 49.6% were classified by the clinic stroke physicians as TIA/minor stroke and 50.4% as mimics. Follow-up was for a median of 34.9 (IQR 27.7–41.6) months with 56 strokes and 106 strokes/TIA. The number of strokes by 7 days, 90 days and 48 months, respectively, were: high risk 0, 2 and 20 and low risk 2, 6 and 36 ($p = 0.21$). Unadjusted HR for subsequent stroke was 1.41 (95% CI 0.82–2.46) in the high-risk group compared with the low-risk group and HR adjusted for the diagnosis of TIA/stroke was 1.2 (95% CI 0.69–2.08).

**Conclusions:** ABCD2 scores recorded by referring clinicians did not identify patients at high risk of subsequent stroke, suggesting that the score should not be used for TIA clinic triage.

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# Emergencias

*Official Journal of the Spanish Society of Emergency Medicine*

## Inclusion of prehospital mortality statistics in severe trauma registries: A study of the influence of inclusion on trauma lethality rates and survival prediction

Fortún Moral M, Ali Ali B, Montes Fernández LM, et al. Emergencias 2016;28:173–8
URL: http://emergencias.portalsemes.org/numeros-anteriores/volumen-28/numero-3/la-importancia-de-incluir-las-muertes-prehospitalarias-en-los-registros-de-traumatismo-grave-y-su-relacin-con-la-letalidad-y-la-capacidad-de-prediccin-de-la-supervivencia/

**Objectives:** To compare the frequency and characteristics of prehospital and hospital deaths and assess whether injury severity and age can predict mortality when prehospital deaths are included or excluded from total mortality.

**Methods:** Descriptive analysis of a retrospective cohort of 918 patients with multiple injuries attended by emergency medical services in Navarre, Spain, in 2010–2013. We analysed prehospital and hospital deaths by cause of injuries and developed and compared the precision of logistic regression models to predict mortality.

**Results:** Most deaths occurred before arrival at a hospital. Three quarters of prehospital deaths occurred in patients under the age of 65 years. When prehospital deaths were included in the analysis, the lethality rate after traffic accidents rose from 16% to 42%; lethality from firearm injuries rose from 13% to 70%. When the model using the new injury severity score and age as independent variables was asked to predict survival with and without data for deaths at the scene or during transfer to a hospital, the model's performance differed only slightly.

**Conclusions:** Most deaths from injuries occur before patients reach a hospital. The main characteristics of prehospital and hospital deaths differ. Including data for prehospital deaths in regression models does not change survival prediction based on injury severity and age.

**Keywords:** Humans; Trauma registries; Mortality; Mortality, prehospital; Logistic regression modeling.

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